

# An Exploration of Barriers of Research-Knowledge Sharing: The Lived-Experiences of Academics in Higher Education Institutions in Amhara Regional State, Ethiopia

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## Abstract

This study investigated the key barriers of research-knowledge sharing (RKS) that influence research-knowledge sharing practices among academics and the influence of top academic leaders on academics' research-knowledge sharing behavior. It attempted to explore the nature of sharing research-knowledge in HEIs in general, and to examine the lived-experiences of academics that act as key barriers on RKS. Previous research findings revealed a lack of research into research-knowledge sharing in higher education (HE). Most importantly, how RKS barriers in the university influence the academics' research-knowledge sharing practices has not yet been fully examined. Qualitative research method was employed to thematically analyze data collected from six academics and three top university managers, selected purposely, from three universities. Data were collected through semi-structured interviews. The findings indicated that key barriers of RKS in the Ethiopian public universities include: fear of losing power, lack of trust, fear of getting one's ideas taken, unavailability of Intellectual Property (IP) protection, time constraint, and lack of confidence. Suggestions are made to improve certain aspects of research-knowledge sharing among academics in higher education institutions. Top university academic managers shall look into the findings to further improve the culture, structure and policy of research-knowledge sharing and the overall research productivity of universities in Amhara Regional State, Ethiopia. The findings of this study provide new insight into the field of research-knowledge sharing adding knowledge to the body of knowledge management and organizational culture. They are of great importance to research-leaders in HEIs to develop, improve and implement research-knowledge sharing strategies.

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## Introduction

Knowledge is the key resource in this era of information. As Sallis and Jones (2002) put it succinctly, the problem today is not how to find the information, but how to manage it; the most important challenge for organizations is how to process knowledge and make it profitable in the knowledge-driven organization. For Wang and Noe (2010), knowledge is taken as a critical organizational resource that provides a sustainable competitive advantage in a dynamic economy.

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To gain this advantage, however, the focus should not simply be on recruiting staff with specific knowledge, skills, or abilities, but also on sharing knowledge between experts and novices that are already part of an organization (Wang & Noe, 2010).

Scholars recommend knowledge should be efficiently and effectively managed. Knowledge management (KM) at organizational, especially, at university level is in its infancy stage. It is not more than 30 years or so that a distinct field called “knowledge management” has emerged. In line with this, King (2009) averred that for centuries, scientists, philosophers, educators, researchers and intelligent laymen have been concerned about creating, acquiring, and communicating knowledge and improving the re-utilization of knowledge.

Riege (2005) argues that knowledge sharing (KS) is the cornerstone of many organizations. Organizations might be unable to function well as knowledge-based entities due to their lack of KS practice. The nature of knowledge affects the KS practice. Scholars (like Nonaka, 1994; Nonaka, Toyama and Nagata, 2000; Smith, 2012) have divided knowledge into two forms – explicit and tacit. Explicit knowledge, often referred to as ‘know-what’, is generally saved in codified form in databases and can be easily conveyed to the receiver without any misunderstanding (Smith, 2012). It is presented in words and numbers and has the potential to be shared in manuals, specifications and scientific data (Nonaka et al., 2000). Tacit knowledge, ‘know-why and ‘know-how,’ can be referred as experimental knowledge. It is unarticulated part of knowledge residing in an individual’s mind (Smith, 2012). It depends upon personal skills and expertise and develops through training and experience, therefore making it difficult to communicate with others particularly whenever the individual refused to do so (Nonaka, 1994).

Even though KS among individuals has been recognized as a positive force for the survival of an organization, factors discouraging KS intention in the organizational context are still poorly understood (Bock et al., 2005). In the context of Malaysia, Norulkamar and Hatamleh (2014) identified two main kinds of barriers (i.e., internal and external) that affect knowledge sharing among academics in Malaysian universities. Internal barriers represent individual barriers such as lack of trust, lack of rewards, lack of time, need for power, personal attitude, lack of self-efficacy etc. On the other hand, external barriers represent organizational (e.g., organizational support, incentive system, management system, organizational culture) and technological barriers (e.g., information technology literacy and application).

A study conducted by Muqadas, et al. (2017), on faculty members of three public universities in Pakistan, explored existence of a significant level of knowledge hoarding among academics and found that the need for power and influence, prevailing unsupportive culture, gaining promotion, and poor association between rewards and knowledge sharing behavior are the main drivers of knowledge hoarding.

In fact, lack of knowledge sharing among academics in universities is more dominant in developing countries (Alsuraihi, Yaghi & Nassuora, 2016). In a similar development, Dokhtesmati and Bousari (2013) conducted a meta-analysis on KS among the academic institutions in Iran and divides the KS barriers prevailing in their academic institutions into (i) human barriers (i.e., lack of trust, lack of time, lack of skill and capability, and knowledge hoarding), (ii) organizational

barriers (i.e., unsuitable organizational structure, organizational culture, and lack of team work), and (iii) technological factors (i.e., low acquaintance with information technologies).

One of the responsibilities of higher education institutions (HEIs) in Ethiopia, as it is noted in the HEIs 2009 proclamation, is to undertake and encourage relevant study, research, and community services in national and local priority areas and disseminate the findings as may be appropriate; undertake, as may be necessary, joint academic and research projects with national and foreign institutions or research centers. There has been a rising concern with regard to an inadequate level of knowledge sharing among the academicians in tertiary institutions across the globe. Scholars argue that improving academic research and quality of education at these institutions greatly depends on the level of knowledge sharing practices among them. Thus, it is important to explore the potential barriers to such research-knowledge sharing. Research-knowledge sharing is all about sharing experiences in writing proposal, using appropriate approach and design, how to analyze data and interpret data. Research done by Yohanis (2015) at Assosa university titled ‘Determinants of Knowledge Sharing Behavior in Higher Education Institution: Case Study of Assosa University Academic Staff, Ethiopia’ indicated that even though most academics are aware of the importance of KS, most of the respondents were not engaged actively in KS behavior. Hence, the major purpose of this study is to investigate key barriers of research-knowledge sharing experience among academics in the selected public universities in Amhara Regional State, Ethiopia.

The aim of this study is to investigate the major barriers of research-knowledge sharing (RKS) lived-experiences of academics in Ethiopian public universities in Amhara Region. This study has the following specific objectives: (1) Explore key barriers that affect the RKS practices among academics and top academic leaders in selected public universities of Amhara Regional State, Ethiopia. (2) Investigate the influence of key barriers on RKS behavior of academics.

Within the boundary of these research objectives, two research questions were developed: (1) What are the key barriers that affect the RSK practices among academics and top academic leaders in selected public universities? (2) How do the key barriers influence academics’ RKS behavior?

The researcher believes that such approach helps to properly understand the complex phenomena of the lived-experiences of university academics and university top managers and uncover factors that inhibit research-knowledge sharing and improving the competitive advantages of the universities.

## Methods

### Research Design

This study used a qualitative research approach. Qualitative research is effective when the researcher’s aim is to gather data related to attitudes, motivations and opinions (Yin, 2003). Qualitative approach was employed as the types of responses sought were largely opinion-based that require some degree of explanation. Furthermore, face-to-face interviews were undertaken because it was considered more personal and conversational, which would not only help elicit

more detailed responses but also attain in-depth understanding about barriers of research-knowledge sharing (RKS) among universities academics. As the research is qualitative case study, generalization couldn't be drawn.

Phenomenological study is employed for this purpose. A phenomenological study explores what people, in this case university academics, experienced and focuses on their experience of a phenomenon. It is an approach to research that seeks to describe the essence of a phenomenon by exploring it from the perspective of those who have experienced it. The goal of phenomenology is to describe the meaning of this experience—both in terms of what was experienced and how it was experienced.

The purpose of this phenomenological study was to explore common themes emerging from the lived-experiences of higher education institutions (universities) academics, and top academic leaders regarding key barriers of research-knowledge sharing (RKS). Major challenges faced by academics in sharing research-knowledge were also explored. The data collection in the study included semi-structured and open-ended face-to-face interviews involving university academics and university top managers in three universities in Amhara regional state, Ethiopia.

Hence, participants in the aforementioned universities were involved and their experiences about their research-knowledge sharing experiences were analyzed using phenomenological study design.

### **Sampling**

The researcher selected research participants based on the knowledge and experience about the particular focus of the study. As a qualitative research, data were gathered from multiple sources. As stated earlier, academics and top university academic managers were key participants for this study. The question of how many participants are needed to conduct a robust qualitative study is difficult to precisely answer. Nevertheless, Hatch (2002) contends that the decision depends on the purpose, kind, and research questions of the study, and suggests a simple formula of maintaining a balance between breadth and depth. Although finding the balance is not easy, specifying the projected number of participants and estimating the amount of time to be spent with them is a key element in qualitative research design (Hatch, 2002). In light of Hatch's recommendation, all academics and top academic managers found in the three universities were taken as a population of the study.

Purposive sampling was employed to select participants in this phenomenological study, which means that the 'researcher handpicks cases to be included in the study on the basis of their typicality' (Cohen et al., 2007). Six (two from each university) academics and three top academic leaders (one from each selected university) were selected for this study. The participants included were with varied research-knowledge sharing experiences. All of them had expressed willingness to participate in the study and were aware that the study was meant only for academic purpose.

For the purpose of this research, the researcher has chosen typical-case selection strategy. The researcher set out criteria that were typical of a person within a group. Based on demographic information, academics and top university academic leaders who had experiences in research activities in three universities were selected purposely for this qualitative research.

On the basis of their academic and leadership experiences, the participants were therefore asked to reflect on factors that inhibit research-knowledge sharing among academics. In addition to this, the researcher as an academic member also observed them in a few instances in sharing research-knowledge to see if the reflections were replica of what they actually practice in their institutions. For the sake of anonymity, letter ‘T’ was used to represent academics (university teachers) and letter ‘L’ was used to represent university top academic managers, respectively. The initial interview questions were: (1) What factors affect the RSK practices among academics in selected public universities of Amhara Regional State? (2) What are the barriers that inhibit academics practicing research-knowledge sharing among themselves? (3) How do key barriers inhibit academics in practicing research-knowledge sharing among academics/staff in the selected universities?

### **Data Gathering**

Data were collected from the individuals who have experienced the phenomenon. Often data collection in phenomenological studies consists of in-depth interviews and multiple interviews with participants. Polkinghorne, cited in Creswell (2007) recommends that researchers interview from 5 to 25 individuals who have all experienced the phenomenon. In this study, face-to-face semi-structured interviews were used to collect data from academics and top university academic managers. Interviews with key informants were carried out among some selected six academic staff and three top university academic managers from three universities in Amhara Regional State, Ethiopia.

### **Data Analysis**

Phenomenological analysis pursues some basic steps. With regard to this, Moustakas, cited in Creswell (2007), states that the steps are generally similar for all psychological phenomenologists who discuss the methods. Building from the first and second research questions, the researcher went through the data (e.g., interview transcriptions) and highlighted significant “statements”, sentences, or quotes that provide an understanding of how the participants experienced the phenomenon. Next, the researcher developed cluster of meanings from these significant statements into themes.

In this study, data analysis was guided by Creswell (2005) view of analysis as three concurrent flows of activity: data condensation, data display, and conclusion or drawing/verification. First, every piece of data gathered was labeled with the date, location, persons involved, and circumstances surrounding the collection of that piece of data for ease of access and analysis. In doing so, the researcher was engaged in writing summaries, developing themes, generating categories, and writing analytic memos. The data which were condensed into themes, summaries, categories, or memos were displayed through narrations, vignettes and descriptions based on the nature of the data.

For analyzing and interpreting the already collected and organized data, core themes and patterns were developed by meticulously examining the transcripts to unfold the lived-experiences and perceptions of the participants of this study. Developing themes from the data consisted of

answering the research questions and framing a deep explanation of the phenomenon of the lived-experiences of academic staff and top university academic managers on research-knowledge sharing.

### **Validity and Reliability**

In qualitative research, there are different ways to approach rigor. This study follows suggestions by Lincoln and Guba (1985) on the alternatives to the “reliability” and “validity” tests appropriate to qualitative research. These are “trustworthiness” and “authenticity”.

Basically, trustworthiness is further divided into four categories: credibility (which parallels internal validity); transferability (which parallels external validity); dependability (which parallels reliability); and confirmability (which parallels objectivity). In this study, credibility is reached by discussing the work with expert qualitative researchers available. On the other hand, “dependability” was demonstrated by an auditing approach by colleagues. The researcher discussed with his colleagues and advisors about the categorization of data in order to practice the “inter-coder analysis” or “member checking. The researcher initially predetermined the codes. Before further categorized the data, the initial codes were then discussed with the other coders so as to find the possibly better connections between categories in progress; before the agreement is reached.

In terms of “confirmability”, this study followed recognizing principles drawn in qualitative research, including multiple coding procedures and constant comparative method. Besides, opinions from peer auditors (i.e., the inter-coder analysis or member checking) were sought from time to time as the work progressed. “Authenticity” raises a wider set of issues concerning the context of the work. There are five criteria suggested by Lincoln and Guba (1985), including fairness, ontological authenticity, educative authenticity, catalytic authenticity, and tactical authenticity. This study has demonstrated one of the authenticity criteria as suggested by Lincoln and Guba (1985) i.e., “fairness”. In this study, fairness is reached through its sampling strategy that ensures the views expressed are fair representations of the group.

## **Results and Discussion**

This study found that there are several barriers that inhibit academics and top academic leaders from engaging in and facilitating RKS. Among such barriers, the key ones include: 1) fear of losing power 2) lack of trust 3) fear of getting one’s idea taken 4) unavailability of Intellectual Property (IP) protection 5) time constraint and 6) lack of confidence. This implies that factors that inhibit research-academics from engaging in RKS are more personal and interconnected with the individual’s own attitudes and organizational factors. This is akin to the findings reported by Syed-Ikhsan and Rowland (2004) that individuals’ attitudes is one of the crucial elements that influence knowledge sharing practice in an organization.

## Fear of Losing Power

The results indicated that a number of research-academics decline to engage in RKS due to fear of losing power. This implies that research culture in selected universities, in Amhara Region, Ethiopia, is possibly more competitive and for that reason, academics are competing with one another, they tend not to share or minimize their frequency to share their research-knowledge. T<sub>1</sub>, for example, reveals that when he was first involved in research, he did not think about the fear of losing power when sharing his knowledge. However, as he progressed in his career, the fear of losing power has become a barrier to sharing research-knowledge.

Honestly, I never thought this kind of situation before... But I came to understand it now knowledge is acquired over years and years...this is a competitive advantage for academics... We don't want to lose the competitive advantage. T<sub>1</sub>

In a sense, this implies that research-academics who are at the early career phase face less fear of losing power than those at mid and senior career phases. This may be owing to lesser experience in terms of RKS. Some evidences regarding this issue are shown below.

Obviously, you don't want to share knowledge more than you should as you don't want to lose your expertise. So, it's a question of managing that correctly. T<sub>2</sub>

If you're putting together of what you think as an innovative idea in order to secure research funding then, you're not going to give the game away to people you regard as rivals, in case they get in there before you. T<sub>3</sub>

I know my main competitors... I know the main people who work in the same field as me and I trust them... without trust I might have fear of becoming less competitive within my own department... T<sub>4</sub>

Two professors in the selected sample universities T<sub>5</sub> and T<sub>6</sub> both support this issue. They agree that fear of losing power is critical and has caused research-academics not to share their research-knowledge.

Academics don't want to lose their competitive advantage on that research. T<sub>5</sub>

In my own field, I know there is a large hesitancy for people to share research... many have fear of losing their power... that's human nature! T<sub>6</sub>

## Lack of Trust

The results also show that lack of trust is another inhibiting factor for RKS practice. As suggested by Nichani and Hung (2002) "trust is the glue that binds the members of a community to act in sharing and adapting manner---without trust, members would hoard their knowledge and experience and would not go through the trouble of sharing with or learning from others". Obviously, trust is a critical factor that makes research-academics feel free to engage in RKS. The following excerpts show evidences pertaining to the issue of lack of trust.

...you have to work with people you trust. T<sub>5</sub>

You have to be cautious about who you discuss your ideas with. I have been careful about whom I share my knowledge and insight until now. I don't simply share it with people without trust except with one or two of my closest colleagues. T<sub>6</sub>

I am more comfortable talking about certain ideas with people whom I trust... I mean, I choose who I want to speak to or share my ideas. T<sub>1</sub>

An academic in one of the selected universities, T<sub>6</sub> has strongly supported the issue of trust in RKS activity. He explained the importance of trust in RKS by sharing his own experience, working with someone who broke the interpersonal trust.

I did try to collaborate with a colleague at another university... I share a great deal of my draft work with him... But he used all the information he got from me in order to write papers on his own account and that broke the trust, and so I would not work with the person I can't trust. T<sub>6</sub>

### Fear of Stealing Ideas

The finding also notifies that some research-academics in the selected sample universities decline to the offer to engage in RKS due to fear of stealing of ideas. T<sub>8</sub> agreed that fear of ideas being stolen is among the key factors that inhibit RKS engagement.

...yeah, your colleagues always pick your best ideas. T<sub>5</sub> I always feel scared that somebody else is going to steal my ideas. T<sub>1</sub>

I don't prefer to share research-knowledge if still rough ideas are easily stolen. T<sub>6</sub>

This issue has gained attentions from many research-leaders in the selected sample universities. The table below represents the evidences quoted from research-leaders regarding the fear of stealing of ideas.

**Table 1.**

*Research-leaders' Comments on the Issue of Fear of Stealing Ideas in the Selected Sample Universities*

Alias	Position	Excerpts
L <sub>1</sub>	Research and community service vice president	"A good idea is not easy to come by, so people don't want to lose that, they don't share it until it is published."
L <sub>2</sub>	Academic Affairs Vice President	"There is a danger that you give someone an idea and that s/he immediately uses your ideas. If one has something very special, you might be a bit greedy about sharing it." Hence, they have fear that someone might grab their ideas and publish it before them.
L <sub>3</sub>	Postgraduate Academic Dean	"...if they have a very good idea, they don't want somebody else to steal it. There's always a danger in academia that there're people who will lose out because they won't have the joy of seeing other people developed".



According to T<sub>6</sub> narration, the performance appraisal system of the university is one of the contributing factors that lead to fear of stealing of ideas.

...something like performance appraisal tends to make it quite difficult to escape from, because each individual academic's performance is measured in terms of their output (publication) and so they're reluctant. T<sub>6</sub>

### **Unavailability of Intellectual Property (IP) Protection**

The finding also signifies that some research-academics have considered the unavailability of IP as an inhibitor factor for RKS. The result supports the finding reported by Riege (2005) who found that the amount of knowledge shared depends upon the availability and extent of IP protection for knowledge sharing activities. T<sub>2</sub> stresses that, "I wouldn't share information before I probably get it published or protected it in a particular IP". Vice President of Research and community services, L<sub>1</sub> confirms that the IP protection is essential, particularly for commercial research projects. He indicates an example of action taken by the university he works in order to manage the IP issue.

...many universities are taking very serious now in their hands how do they actually manage IP in a knowledge sharing environment... that would be an interesting challenge for the university in research where people have started working in more diverse team in areas where the IP actually has value. At the same time, L<sub>1</sub> clarifies that it is important for the university to educate all research-academics concerning the IP protection for risk avoidance purposes. ...certainly one other thing we're doing is making researchers much more conscious of what the IP issues actually are. L<sub>1</sub>

In one way or another, the unavailability of IP protection also has been mentioned by research academics. For that reason, they are more concerned about the IP protection of their research work. Without IP protection, they more likely resist engaging in RKS.

### **Lack of Confidence or Self-efficacy**

The results also indicated that lack of confidence is inhibitor factor for RKS. As found by Lin et al. (2009), employees with high competence and confidence in their ability to provide valuable knowledge are more likely to engage in knowledge sharing and tend to have stronger motivation to share knowledge with their colleagues. However, only a very small number of research-academics in the selected sample universities talks about this issue. T<sub>1</sub> for example, expressed her lack of confidence about her research work, which then made her resist engaging in RKS. "I sometimes feel worried that my idea will be devalued by criticisms. I lose my confidence. I am afraid that my study is not going to be looked favorably by my superiors or colleagues". T<sub>1</sub>

Research and community service vice president in one of the selected sample universities, L<sub>1</sub>, shares his idea concerning this issue. Interestingly, L<sub>1</sub> explains that lack of confidence occurs due to lack of social skills among research-academics. "People, who don't like working with other people or simply lack of social skills, face the problem of sharing research-knowledge to their colleagues. It is not uncommon in academia to find such people around".

L<sub>1</sub>'s explanation is in line with Riege's (2005) claim that at an individual or employee level, a factor like poor communication skills is one of the barriers of knowledge sharing. Riege argues that "the ability of employees to share knowledge depends primarily on their communication skills". The very low responses gained in the selected sample universities with regard to this inhibiting factor implies that majority research-academics in these universities have more research know-how, in which they are more capable and skillful in terms of research. Still there are some academics that lack confidence in engaging themselves in RKS. Therefore, the lacking of sense of self-efficacy issue may be a factor that somehow inhibits them from engaging in RKS.

### **When Sharing (or not)**

The "when sharing (or not)" issue refers to the research timeline that individual research-academics share or not share their research-knowledge. These emerged largely from the participants' answers to the question: "When do you share and not share your research-knowledge?" The respondents reflected in the subthemes below.

#### ***Not sharing research idea and research proposal***

The result shows that a number of research-academics in the selected sample universities do not share research-knowledge at the initial stage of the research idea and up to the proposal development. The finding reveals that more than half of research-academics consider that during research idea and proposal phase, their knowledge is not yet well developed and still uncertain.

T<sub>1</sub> for example, indicates that she does not share knowledge at the very basic point, where "my ideas are still immature and not well-developed." T<sub>3</sub>, at the same time asserts that, "...if I don't have strong concrete basis for that idea, then I won't be sharing it yet you know because I feel as a junior researcher, I should be very vigilant when sharing my research knowledge with people when my ideas are still undeveloped. In these early phases, I don't prefer to share it because these are still unpolished ideas." T<sub>3</sub>

In a sense, this implies that research-academics fear that it is possible that they are sharing something valuable with other people and that idea might get stolen. As stated by Huber (2001) employees "who had valuable knowledge were reluctant, or at least hesitant, to share it, and sometimes successfully avoided sharing it."

#### ***Not sharing research design and research methodology***

The result showed a small number of research-academics in the selected sample universities don't share their research-knowledge during research design and research methodology phases. It is fascinating to recognize that at these two phases, research-academics chose to seek knowledge from other colleagues but at the same time hoard their own research projects concerning research design and research methodology. "... I think it's the other way around, I think it's more than that I go out and seek for knowledge just to make sure that I use the right method for the right research." T<sub>4</sub>.

T<sub>4</sub> asserts that instead of sharing research-knowledge, at these two phases, research-academics decide to seek knowledge from other colleagues who they believe have the appropriate knowledge in order to assist their works. Knowledge seeking is geared toward those who are expected to provide useful information instead of sharing knowledge.

### ***Sharing only research results***

The findings indicate that almost all of the research-academics in the selected sample universities rarely share at other phases, except research results. Research results for this study refer to any publication or book.

T<sub>1</sub> for example, clearly mentions that she would not share knowledge before any publication is made. T<sub>3</sub> says, “I don’t see myself sharing at other stages than results”. Interestingly, he further explains that the reasons research-academics should not be sharing research related idea before getting the results is because there are some knowledge entrepreneurs’.

I don’t share knowledge at any other point than results. For me, academics are kind of individual knowledge entrepreneurs. So, if you have something that you think an innovative idea then, don’t give the game away to other people, especially those you regard as rivals in case they get in there before you. T<sub>3</sub>

“Knowledge entrepreneur” in this context refers to someone who can generate income for the workplace. In this study, some research-academics, in the selected sample universities can be seen as “knowledge income generators” to the university and owing that they resist sharing the unpublished research as they are targeting to get the ideas published in order to stay competitive.

### ***Sharing across all research phases***

Interestingly, the results also indicated a number of research-academics share research-knowledge at all research phases. Interviewees elucidated their ideas with regard to sharing their knowledge across all research phases. For example, T<sub>2</sub>, says it is interesting to note that there is one condition for sharing across all research phases, that is, trust.

I actively share information with anyone at any phase. Sometimes, I suppose at various stages you got more knowledge and more information if you share... But I don’t share it outside of that sort of my trusted team of people at that stage. T<sub>2</sub>

T<sub>1</sub> also notifies the same thing. He said, “I must have been sharing knowledge at the very beginning phase, but only to the person I trust not to everyone else”. T<sub>6</sub> at the same time, points out that he has to be very careful when sharing research-knowledge. In this regard, he said the following: “I share it with people throughout, but always be very careful when sharing because you’ll never know. So, it tends to fall between me and people I trust”.

This implies that without trust, research-academics are most likely not freely sharing their research-knowledge across all research phases. As suggested by Levin et al. (2002), trust is a condition that links strong ties and knowledge. The results confirm the findings reported by Chen and Hung (2010), who concludes that interpersonal trust is significantly and positively associated with knowledge sharing practice.

### ***Sharing at research result***

The results showed that all participants unanimously share research-knowledge at the last research phase, i.e., research result. T<sub>5</sub> for example, explains that,

I guess when we're still not analyzing the data, we will be a bit more careful because you don't want to go beyond what your data actually says. T<sub>5</sub>

This implies that research-academics do not completely feel free sharing their research results as they are not well established and protected, and are unable to reduce the risks of ideas being stolen or plagiarized.

Remarkably, this study has discovered a distinctive finding concerning the RKS process in the selected sample universities. The results indicated that all research-leaders in these universities state that RKS need to be managed carefully. It has been revealed not all research-knowledge can be shared freely in public at all times. Research-leaders suggest that some research-knowledge needs to be hoarded at certain points within the research timeline. The following excerpts contain evidences from professors in these universities concerning this issue.

Don't think of sharing as being sharing with everybody except when you're getting actually published a paper or a report. Think of it as controlled sharing and take control of the sharing. L<sub>1</sub>

You have to make wise decision about to share or not to share. If you want to share, then you have to think what to share with people and what to keep for yourself. It must be properly managed. L<sub>2</sub>

I believe you want to make sure you fully exploit all the benefits of your research so you may want to hold back on disseminating that work, until you're in a position to fully exploit it. T<sub>5</sub>

You must be thinking very wisely before sharing your work with people. The sharing of research-knowledge needs to be managed properly. L<sub>3</sub>

Interestingly, the finding contradicts to Konstantinou's (2010) argument that knowledge hoarding leads to inefficiency, fragmentation or breakdown in an organization. In this study, the result suggests that knowledge hoarding is sometimes critically important in academia, so that research-academics will not lose the benefits of the research they work on.

### **What to Share**

The "what to share" issue refers to the type of knowledge that individual research-academics choose to share. This emerged largely from the participants' answers to two questions: 1) Do you normally share both tacit and explicit knowledge together or separately and why? And 2) What types of knowledge do you normally share with regard to research? The results showed that in the three selected universities, the types of knowledge shared by research-academics can be broken down into three aspects: (1) sharing both tacit and explicit knowledge; (2) sharing mainly

explicit knowledge; and (3) sharing only explicit knowledge. The results showed that no one is sharing only tacit knowledge.

### *Sharing both tacit and explicit knowledge*

The results indicated that majority research-academics prefer to share both tacit and explicit knowledge. They argued that tacit and explicit knowledge are inseparable. This is akin to Polanyi's (1966) idea, who argued that the concept of tacit knowledge was not a separate category of knowledge, and opposes Nonaka and Takeuchi's (1995) arguments that tacit and explicit knowledge are two separate types of knowledge. The following excerpts evidenced this issue.

In sharing knowledge, I can't see the dichotomy between tacit and explicit. For me it happens naturally that we don't realize we share knowledge. T<sub>6</sub>

...it sounds a bit odd because I can't think of any knowledge that I would have that I can't put into some sorts of documented form. Well, I don't simply share documents and hard copy materials with people. I have discussions with them as well. L<sub>3</sub>

L<sub>2</sub> who believes that knowledge is tacit and explicit in nature at the same time, explains that he unavoidably shares tacit knowledge while sharing the explicit knowledge, though unconsciously.

...research-academics are probably doing both without realizing it. Knowledge is necessarily tacit and explicit at the same time. I don't really make a conscious distinction between the two. I wouldn't say that in my research exchange I really make that kind of distinction but I imagine that both things happen simultaneously. L<sub>2</sub>

Interestingly, L<sub>2</sub> conveys that the sharing of his tacit knowledge supports his explicit knowledge sharing.

...when you go out and present your paper or idea, so people might ask questions and that's where you share your tacit knowledge, it supports your explicit knowledge. It may not be there written in your paper explicitly. L<sub>3</sub>

L<sub>3</sub>'s comment supports the claim made by Jasimuddin et al. (2005) that explicit knowledge is supported by tacit knowledge. As suggested by Bollinger and Smith (2001), people who have the "know how" (or tacit) knowledge are considered unconsciously skilled. For that reason, they tend to share their tacit knowledge unconsciously.

T<sub>4</sub>, on the other hand, indicated that the sharing of tacit and explicit knowledge depends on the kind of person one has communicated with. He explains that his tacit knowledge is often shared with people working on the same area with him, whereas explicit knowledge is used when one talks to people with less knowledge about his/her area of expertise.

...it depends on whom you have the conversations with. If it is kind of colleagues or people with similar level to myself or more senior colleagues that would be more

tacit as we understand each other's area very well. If it's about my work in general, then it would be much more explicit and codified. T<sub>3</sub>

L<sub>3</sub> also supports T<sub>4</sub>'s comment. He said he uses tacit knowledge when talking with people who work in the same area or have more experience, whereas explicit knowledge is used when he communicates with wider group of people.

It always depends to person you talk to. If someone who is experienced, very senior researcher or within the same area of interest, we don't have to talk about all the tacit knowledge that much because this person most likely knows a lot about it already. L<sub>4</sub>

### ***Sharing mainly explicit knowledge***

The finding showed that some research-academics in the selected sample universities choose to share more explicit knowledge than tacit. In a sense, this communicates that this group of people are those who believe that tacit and explicit knowledge are separable things. T<sub>1</sub> for example, asserted that explicit knowledge outweighs the sharing of her tacit knowledge.

We may have some tacit knowledge confirmed by research but not necessarily deliberately. It's just the way things happen. I tend to share things which are explicit that I have found, rather than things I just know. T<sub>1</sub>

Interestingly, T<sub>2</sub> has come up with a different view. He explained that he shares different types of knowledge at particular phases of a research project.

What it bothers you really depends on which stage of the research I am in. Say if I'm at the beginning... some tacit knowledge that I can express, some ideas, or hints, or speculations, I don't share much during this point of time. But the farther the research phases is, it's more completed and knowledge has been consolidating, over few months... that is more of sharing the explicit knowledge... talking to people about what I'm working on in the formal explicit, definite, consolidated way. So, this is where I share most, explicit knowledge. T<sub>2</sub>

Similarly, T<sub>3</sub> and T<sub>4</sub> both state that their preferences to share mainly explicit knowledge are also influenced by the research timeline of their research project. Both of them avoid sharing at the very early phases, i.e., research idea and research proposal.

I believe this is due to my preferences to share ideas when they are stronger, well-developed and not when they are still uncertain or immature. T<sub>3</sub>

The findings revealed that for RKS, the type of knowledge shared is influenced by the research timeline of a particular research project.

### ***Sharing only explicit knowledge***

It is found that a small number of research-academics in the selected sample universities choose to share only explicit knowledge. The result implies that these groups of research-academics are those who believe that there is a clear dichotomy between tacit and explicit

knowledge. As suggested by Nonaka and Takeuchi (1995) and Mooradian (2005), tacit knowledge is intrinsically different from explicit knowledge, and making tacit knowledge explicit is to change it following the process of converting tacit into explicit knowledge. The same finding has not been discovered in the selected sample universities. The following two excerpts showed the evidences gained from research-academics in the selected sample universities.

I only share my results. The only way you can share tacit knowledge is to work together probably through a project or chat with colleagues at the corridor...that is beyond the scope of the presentation. I often talk about the paper that has been published. However, I might be sharing tacit knowledge without I realize it. T<sub>5</sub>

I think I only share the explicit knowledge because tacit knowledge is still rough and at first I need to make myself comfortably get that knowledge. I need to think more and more and get my idea more structured for delivering steps. But maybe, while sharing explicit knowledge, I might be sharing tacit knowledge as well. T<sub>3</sub>

However, while these groups of research-academics claim that they only share explicit knowledge, they admit that they might simultaneously be sharing tacit knowledge unconsciously. Again, as stated by Bollinger and Smith (2001) people tend to share their tacit knowledge unconsciously. In this study, although research-academics claim that they share only explicit knowledge, they may possibly share their “know-how” skills or tacit knowledge unconsciously. As noted by Nonaka et al. (2001), tacit knowledge is rooted in action, procedures, routines, commitment, ideals, values, and emotions of an individual

## Conclusion and Implications

The major objective of the present study was to investigate the key barriers that influence academics’ research-knowledge sharing practices in higher education institutions (universities). The semi-structured and in-depth interviews were employed to collect data from respondents of the research so that their insights can help stakeholders, colleagues and academic leaders to understand their needs in order to improve the culture of research-knowledge sharing, especially research-knowledge sharing. Phenomenological case study was used to analyze collected data to uncover key impediments that affect the lived-experiences of university academics and top academic leaders on their research-knowledge sharing practices.

The findings revealed that knowledge sharing barriers inhibit academic staff to receive and provide knowledge in the context of higher education institutions. In this regard, lack of trust, low sense of research-knowledge self-efficacy, unavailability of well-established and fully functioning Intellectual Property (IP) protocol, lack of support from top academic leaders, strategy, fear of research ideas being stolen, when to share (or not), what to share (or not) and related factors negatively affected the research-knowledge sharing potential among the academic staff within higher education institutions. Besides, this research tried to examine the major challenges university academics face while practicing research-knowledge sharing in the actual working

environment. At the same time, this study made an effort to find out what opportunities university academics have received from the top university academic leaders and the institutions.

The findings from this study provided evidences on key barriers that exist in higher education institutions and their effect on research-knowledge sharing. Thus, universities need to find out the barriers and their relative importance, concentrate their capabilities and resources to eliminate these barriers, and create an environment for research-knowledge sharing to take place and flourish among academics. Attention is needed from the policy and decision makers that different barriers require different approaches and solutions. Organizational structures and culture, people and their relationship need to be considered when research-knowledge sharing barriers are being identified and removed. Some individual and organizational-level interventions need to be initiated to foster research-knowledge sharing practice among university academics.

Generally, this paper contributes to the existing body of knowledge in terms of identifying the types of research-knowledge sharing barriers, their relative importance, and effect on research-knowledge sharing practices among academics in the selected universities in Ethiopia, Amhara Regional State. Universities need to consciously and explicitly manage the research-knowledge sharing activities associated with the creation of their knowledge assets and to recognize the value of their intellectual capital to their continuing role in society and in a wider global marketplace for international competitiveness. In doing so, they need to pay attention to research-knowledge sharing barriers that need to be identified and abolished so that effective research-knowledge sharing related activities and behaviors can flourish among academics in HEIs. Potential future studies may also include factors and mediators that affect research-knowledge sharing behaviors in higher education institutions.

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